SAMSUNG

User Manual

SAMSUNG

TS48W ***

The following safety warnings and precautions are to prevent personal injuries and property damage.
Please read all the instructions to use the product properly.

Register your product at www.samsung.com/global/register

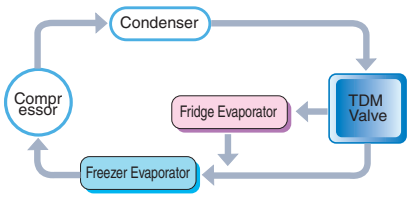
ENGLISH

SAMSUNG refrigerators feature the following functions.

Its TDM cycle makes it possible to extend storage of food for longer peroids.

TWIN Cooling TDM

By monitoring the states of the freezer and the fridge compartments on a real time basis, it runs both of the evaporators in optimal conditions and makes it possible to maintain world best 71% of humidity in the fridge compartment and extend storage life of food. SAMSUNG refrigerators' licensed technology.



Nano Silver Health System for antibiosis and bacteriostasis

Elimination Rate

By nano-coating the liner surfaces (compartments and doors) with silver, it prevents the propagation of bacteria inside of the refrigerator making it possible to store foods safely much longer.

■ Advantages of Silver Nano-Coating

- It does not harm the human body, is nonpoisonous and prevents the propagation of more than 650 kinds of bacteria, viruses and fungi.
- Most of bacteria, viruses and fungi will be destroyed or impossible to propagate by the electric force of Ag+ions.
- It is made of silver particles which are effective without the deterioration of its antibiosis and bacteriostasis functions for its life time.

Fresh Island : Cutting Edge Customized Temp Control System

By optimizing storage temperatures and realizing 71% of hu midity with TWIN Cooling TDM, it is now possible to customize its storage temperatures for various types of foods and different purposes.

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Make sure to follow the instructions for your safety.

The following instructions are to prevent personal injuries and property damage. Please read all the instructions to use the product properly.

■ Advantage

Warning

- Before operating the appliance, please read this manual thoroughly and retain it for your reference.
- Because these following operating instructions cover various models, the characteris tics of your refrigerator may differ slightly from those described in this manual.
- The appliance is not intended for use by children or infirm persons without adult supervision.
- Children should be supervised to ensure that they do not play with the appliance.
- HFC- R134a is used as a refrigerant.
- The refrigerator only use ice makers which are made by samsung Electronics for the refrigerator.
- The incorporated ice-makers are to be installed only by the manufacture or its service agent.

CAUTION/WARNING SYMBOLS USED

230~240V	This product operates on rated 240V.
Warning	It indicates that there is possibility of death or serious injury if the instruction is not complied with.
Caution	It indicates that there is possibility of personal injuries or property damage if the instruction is not complied with.

OTHER SYMBOLS USED

Note	It explains terms to help users to understand how to use the product properly.	Term*	It helps users to use the product more efficiently.
	It is a mark indicating that the power plug should be removed from the wall outlet.		It is a mark indicating that it is prohibited to disassemble.
	It is a mark indicating that earthing is required to prevent electric shock.	p	It is a mark for a reference page.

Warning

Do not plug several appliances into the same multiple power board.
- This could cause overheating and the risk of fire.

Make sure that the power plug is not squashed or dam-aged by the back of the refrigerator .
- A damaged power plug may overheat and cause fire.

Do not bend the power cord excessively or place heavy articles on it .
- This constitutes a fire hazard. If the power cord is damaged, have it replaced immediately by the manufacturer or its service agent.

Do not directly spray water inside or outside the refrigerator.
- There is a risk of fire or electric shock.

Do not spray inflamable gas near the refrigerator.
- There is a risk of explosion or fire.

Do not insert the power plug with wet hands.
- You may receive an electric shock.

Do not put a container filled with water on the refrigerator.
- If spilled, there is a risk of fire or electric shock.

Do not install the refrigerator in a damp place or a place where it may come in contact with water.
- Deteriorated insulation of electrical parts may cause an electric shock or fire.

Do not store volatile or flammable substances in the refrigerator.
- The storage of benzene, thinner, alcohol, ether, LP gas and other such products may cause explosions.

Do not disassemble or repair the refrigerator by yourself.
- You run the risk of causing a fire, malfunctions and/or personal injury.

Do not change the interior halogen lamp by yourself but call to service center.
- Otherwise, there is a risk of electric shock.

When disposing of a refrigerator, remove the door/door seals/door latch so that children or small animals cannot become trapped inside.

The refrigerator must be earthed.
- You must earth the refrigerator to prevent any power leak ages or electric shocks caused by current leakage from the refrigerator.

Never use gas pipes, telephone lines or other potential lightening rods as earth.
- Improper use of the earthed plug can result in electric shock.

Warning

- Keep ventilation openings in the appliance enclosure or mounting structure clear of obstruction.
- Do not use mechanical devices or any other means to accelerate the defrosting process, other than those recommended by the manufacturer.
- Do not damage the refrigerant circuit.
- Do not use electrical appliances inside the refrigerator/freezer, unless they are of a type recommended by the manufacturer.

Warning

This product has 360ºCrotating casters.
So, if you take your hands off the product on a slant, it will skid on the slant and fall over. To preventIt, make sure to hold the product firmly.
• If the product topples over, it cause severe injuries or death.

This product is top heavy. So, there is the possibility of tipping forward when it is not installed properly. When moving the product, make sure not to tip it over.
• If the product topples over, it cause severe injuries or death.

Caution

Do not overfill the refrigerator with food.
• When you open the door, an item may fall out and cause personal injury or material damage.

Do not put bottles or glass containers in the freezer.
• When the contents freeze, the glass may break and cause personal injury.

If the wall socket is loose, do not insert the power plug.
• There is a risk of electric shock or fire.

Do not disconnect the power cord by pulling on it.
• Damage to the cord may cause a short-circuit, fire and/or electric shock.
• If the power cord is damaged, it must be replaced by the manufacturer, a certified service agent or qualified service person in order to avoid a hazard.

Do not store articles on the top of the appliance.
• When you open or close the door, the articles may fall and cause personal injury and/or material damage.

Do not store pharmaceuticals products, scientific materials or temperature-sensitive products in the refrigerator.
• Products that require strict temperature controls must not be stored in the refrigerator.

Do not let children hang on the door. a serious injury may occur.
If you smell pharmaceutical or smoke, pull out the power plug immediately and contact your SAMSUNG Electronics service center.

Do not touch the inside walls of the freezer or products stored in the freezer with wet hands.
• This may cause frostbite.

Do not insert your hands into the bottom area under the appliance.
• Any sharp edges may cause personal injury.

Never put fingers or other objects into the dispenser hole and ice chute. It may cause personal injury or material damage.
HFC- R134a is used as a refrigerant.

Caution

The refrigerant used in the refrigerator/freezer and the gases in the insulation material require special disposal procedures. Ensure that none of the pipes on the back of the appliance are damaged prior to disposal.
Do not use a wet or damp cloth when cleaning the plug.
Remove any foreign matter or dust from the power plug pins.
• Otherwise there is a risk of fire.
• If the refrigerator is disconnected from the power supply, you should wait for at least five minutes before plugging it back.

When there is thunder or lightening or when the product is not used for a long time, flip up the grill panel and set the power switch to the O (OFF).
• Possibility of electric shock or fire.

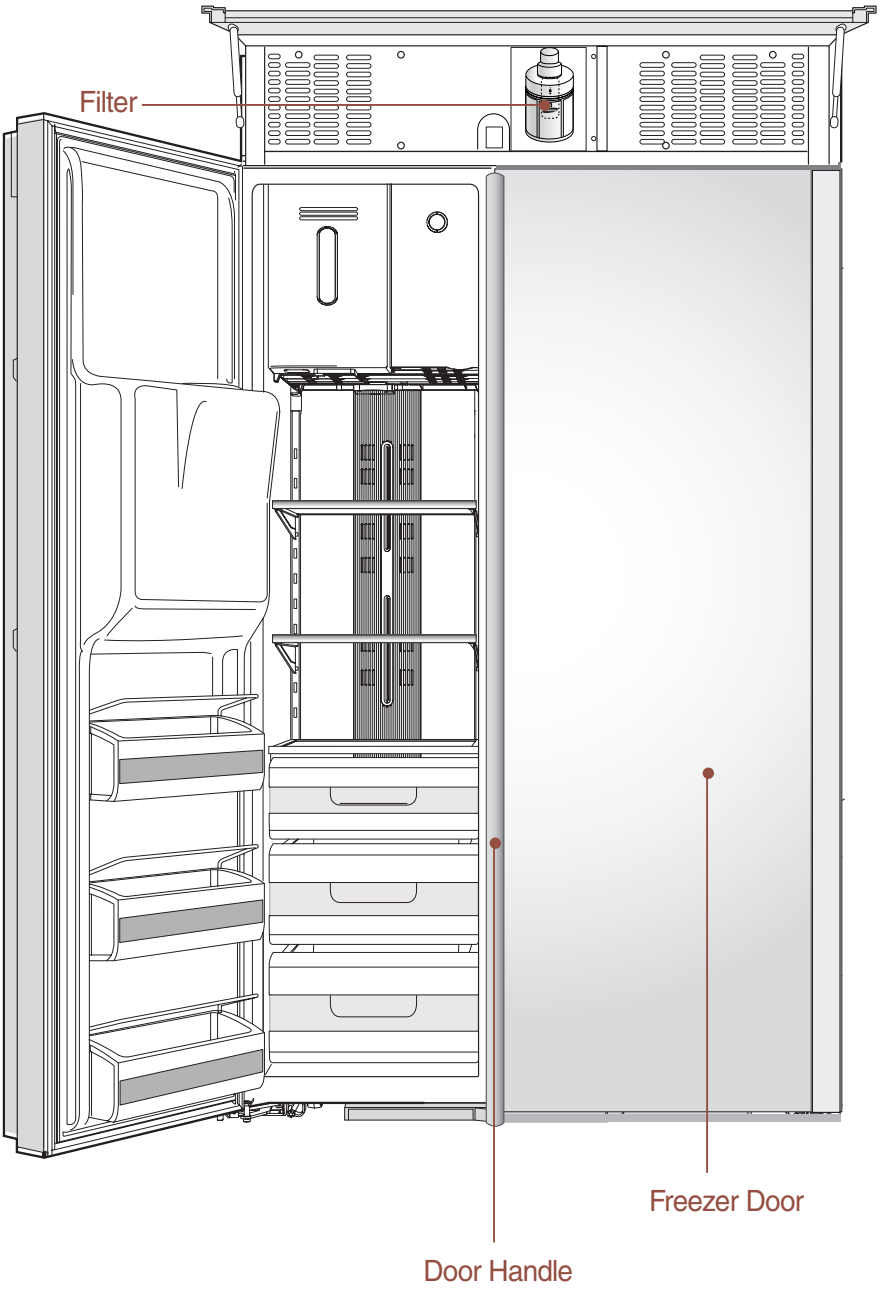
The appliance is not intended for use by young children or infirm persons without supervision.
Young children should be supervised to ensure that they do not play with the appliance.
Do not store items in the ventilation space.
• It will cause a decrease in cooling capacity.

Do not place the fridge directly under the sunlight.
The power plug must be connected before the appliance is positioned.
If the power cord is damaged it must be replaced by manufacturer, a certified service agent or qualified service personnel.
• Never start up an appliance showing any signs of damage. If in doubt, consult your dealer.

Please dispose of the packaging material for this product in an environmentally friendly manner.
Please contact your local authorities in regard to the enviromentally safe disposal of this product.
This product is intended only for the storage of food in a domestic environment.

Remember each part name.

Grill Panel
Button & Display Panel
Show the set functions.
Freezer Door
Dispenser
supplies drink water via a water filter
and ice cubes made with the ice maker.

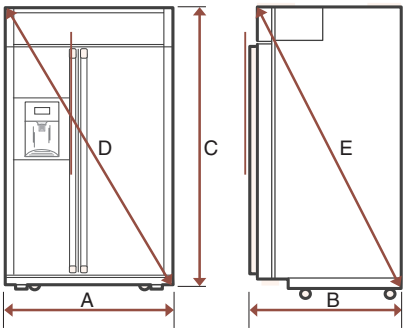

Filter
Freezer Door
Door Handle

Select an installation place

Please check the followings before install the product.
Check if the product can clear the doors on its way to the installation position.

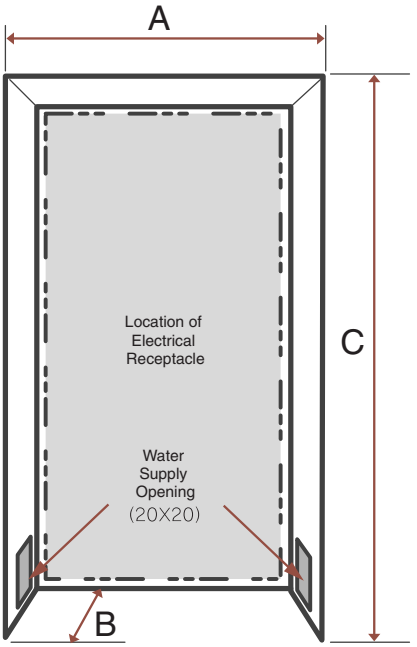
▶ If the product is not able to clear the doors, it is not possible to install.

Model	A	B	C	D	E	Etc
TS48W ***	1,219	706	2,083	2,413	2,182	48"



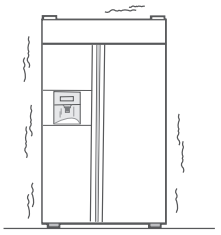
Please check if there is enough space to install the product.

▶ If there is not enough space, it is not possible to install.



Model	A	B	C	Etc
TS48W***	1,220	over than 660mm	2,120Min 2,130Max	48"

Select an installation place

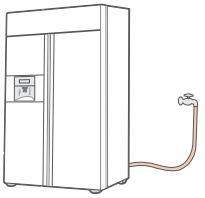


Check if the floor is flat.

- If the refrigerator is installed on an uneven floor, it will cause vibration and noise.

Check if the floor can support the weight of the refrigerator and the food inside (500Kg total).

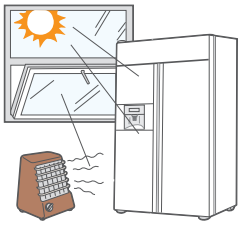
- It could damage the refrigerator.



Check if the product is placed within the reach of a wall outlet.

When the product is a dispenser model, check if it is within easy access of water supply and the humidity is low.

- Please select a place with easy access to water supply for the the water & ice dispenser.



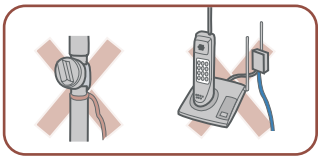
Avoid a place with high heat or extremely cold.

- Install the product with an ambient temperature between 5ºCand 43ºC.
  When it is installed in a place with an extremely cold or hot ambient temperature, the product could mal-function and its cooling capacity will decrease resulting in an increase in
- power consumption.

Earth the product

Make sure to earth the product to prevent electric leakage or an electric shock.

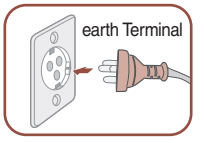
- When the product fails to operate : Make sure it is earthed to prevent electric leakage or an electric shock.
- When there is no earth with normal products:When touching the handle or surface of the product, a minute amount of electric leakage can be felt. (It can be felt on all products made of electricity conducting materials (metal plate).It is obliged to use a right angle power plug. Also, make sure to earth the product.)

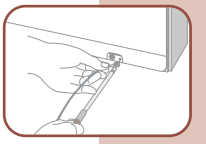


Caution Do not earth it to a gas pipe or a telephone cord. Possibility of explosion, electric shock or fire.

<When the wall outlet has a earth terminal>

- It doesn't need earthing. (But, when the wall outlet has no earth terminal, make sure to earth the product.)

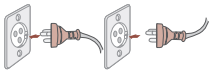




<When the wall outlet has no earth terminal>

- When plugging the product into a wall outlet having no earth, connect the earth wire to the earth screw on the back of the product and then connect the other end to a metallic water pipe or earth guide.
- Never use a wall outlet or an extension cord having no earth wire. (Without earth, minute electric leakage can be generated.)
- Please refer to the installation manual for installation details.

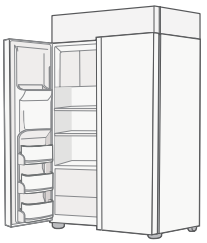
Note



- Maker sure your house power supply has an earth circuit always use a 3 pin plus with an earth wire.

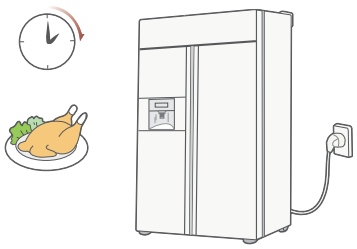
Check the following before use.

Before using the refrigerator, make sure to check the followings.
It will show ways to use the product safely and efficiently.



When plastic smells are coming from the refrigerator

- Open the refrigerator doors and air the inside.
  - With a new product, there could be plastic smells inside the refrigerator.
- Before using the product, please remove all the adhesive tapes eliminating chemical smells.

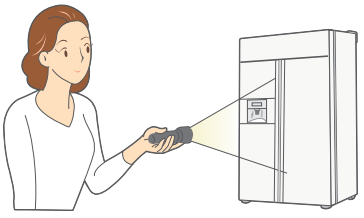


When storing food for the first time

- Place food in the refrigerator when it cools down in 2~3 hours after the product is plugged in.
  - When you place food in the refrigerator before it cools enough, food smells permeate the inner liners.

When the start-up sound is loud

- When starting up a new refrigerator, the compressor and the motor operate at high rpm to cool down the freezer and the fridge compartments quickly, generating a slight noise.
  - When it gets to the set temperature and reaches a stable state, the noise decrease.

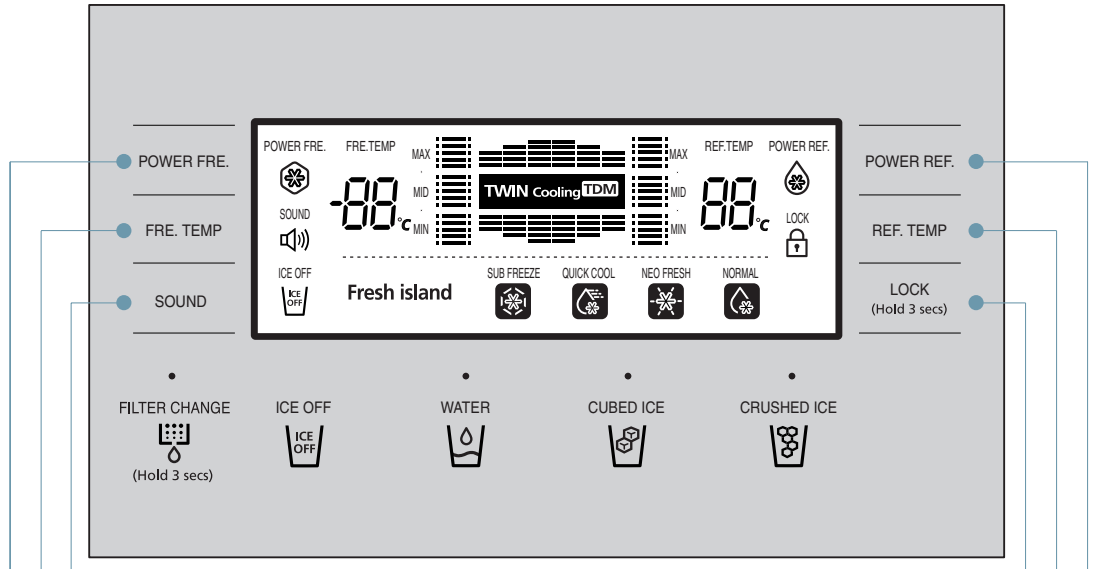


When the power goes off

- Please maintain the doors closed.
  - When the power does not come back on for 2~3 hours in summer, the cool temperature inside will be maintained.

When an alarm goes off during operation

- If any one of the doors remains open at a more than 15 degree angle for more than 2minutes, it sends off an alarming sound every minute indicating that a door is open.



SOUND
You can select or cancel it.

FRE. TEMP
The freezer compartment temperature can be set at between -25°C and -17°C by pressing this button.

POWER FRE.
You can use this function to freeze food quickly or to make ice cubes much faster.

Button & Display Panel

LOCK
You can lock all the buttons with this function.

REF. TEMP
The fridge compartment temperature can be set at between 0°C and 5°C by pressing this button.

POWER REF.
You can use this function to cool down the compartment faster.

■ Dispenser Function Select Button

ICE OFF

ICE OFF
▶ Select it when you do not use the ice maker.

WATER

WATER
▶ Select it for water.

CUBED ICE

CUBED ICE
▶ Select it for cubed ice.

CRUSHED ICE

CRUSHED ICE
▶ Select it for crushed ice.

■ Fresh Island Function Display

SUB FREEZE

SUB FREEZE
▶ It shows that Fresh Island is operating in sub freezing conditions.

QUICK COOL

QUICK COOL
▶ It shows that Fresh Island is operating in quick cooling conditions.

NEO FRESH

NEO FRESH
▶ It shows that Fresh Island is operating in optimized refrigeration conditions.

NORMAL

NORMAL
▶ It shows that Fresh Island is operating in normal refrigeration conditions.

❉ The above functions are available only with Fresh Island.

■ Water Filter Indicator Function Display

FILTER CHANGE
(Hold 3 secs)

Water Filter Indicator
▶ When the green light changes to yellow, it is time to replace the water filter. If indicator is red, quick replacement is strongly recommended.
▶ When the water filter is replaced, reset the indicator by pressing the FILTER CHANGE button for 3 seconds.

Let's figure out the correct use of each storage space.

Each storage space provides its own storage conditions for different kinds of food. You can enjoy the optimum taste of food by storing it in a selected place.

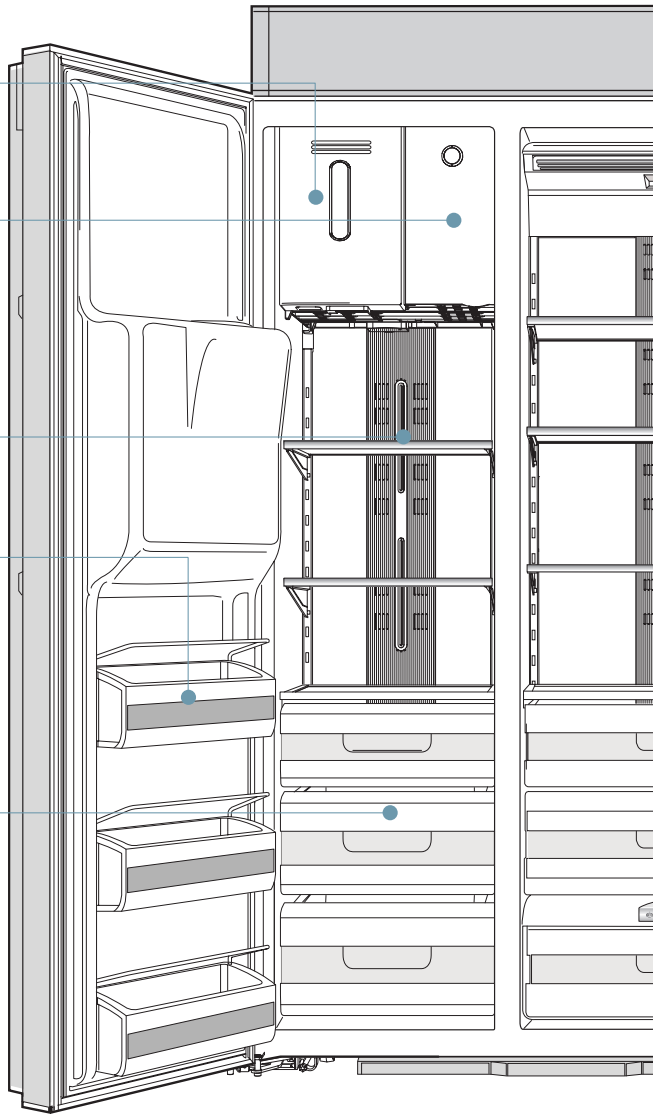
Ice Bin
Store ice cubes made by the ice maker.
Do not store other food except ice cubes.

Winter Closet
You can store frozen pizzas and ice cream etc.

Freezer Compartment Shelf
You can store various kinds of frozen food such as meat, fish, and ice creams.

Freezer Door Bin
You can store small packaged frozen food such as beans. But, do not store ice creams or food for long time storage

Dried Food & Meat Keeper.
For the purpose of storing for a long time and store meat and chicken after wrapping with aluminum foil or plastic wrap.



■ Tips on food storage

Store fruits after washing in water.

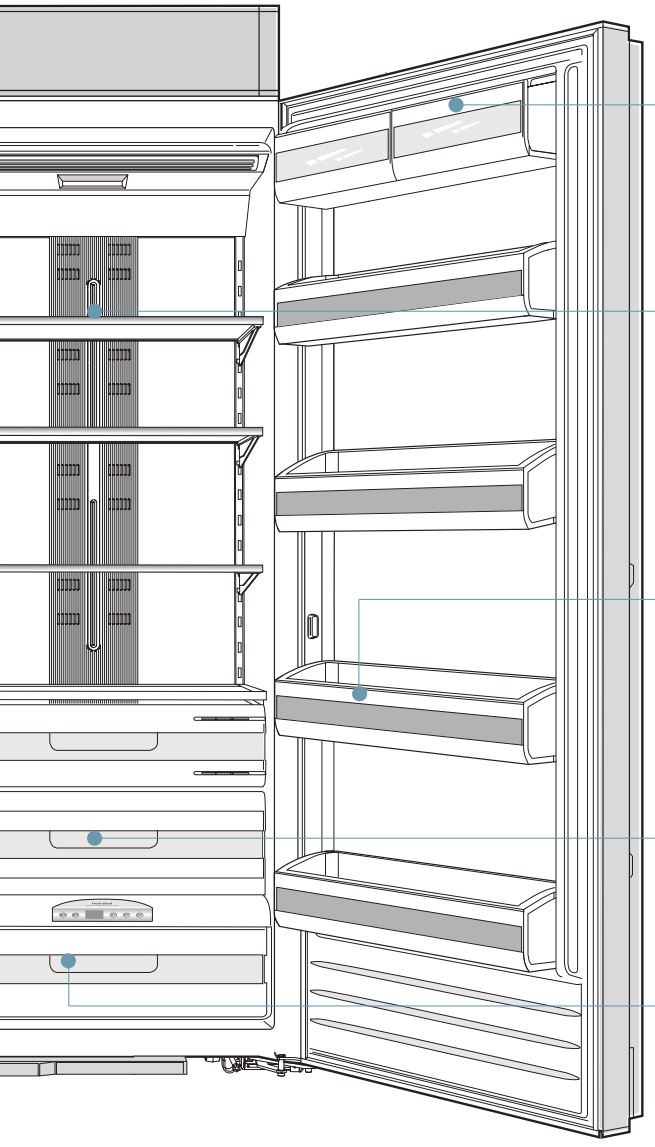
Divide storing food into small sizes and store them.
♣ Power can be saved because food can be cooled-down quickly.

Put food with higher water contents on the front part of the fridge shelf.
♣ When you put it on the inner part of the fridge shelf directly exposed to the cold air, it could becom frozen.

Make sure to store food containers with lids or plastic wrap on them.

Do not store hot foods cooling it down.
♣ If you cool it down before putting it in the refrigerator, the product can perform efficiently and power can be saved.
♣ When hot food is put in the refrigerator, it could cause water condensation or frost inside.

Please store foods with enough space between items.
♣ When excessive amount of food is stored, it could interrupt air circulation resulting in a decrease cooling capability.



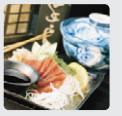
Dairy Bin
You can store dairy products such as butter and cheese.

Fridge Compartment Shelf
Please put dishes or refrigerated foods with enough space between items.

Fridge Door Bin
You can store small packaged refrigerated food and beverages such as milk, fruit juice and beer.

Veggie/Fruit Drawer
You can store vegetables and fruits in fresh conditions.

Fresh Island
You can store meat, raw fish and food which needs to be stored at lower temperature than that in the fridge compartment to be used within a week.(→ Refer to P.19~20)

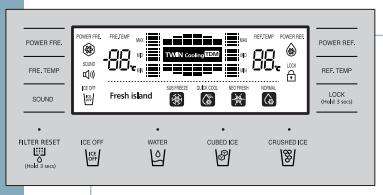


Caution

- Do not touch on containers or food in the freezer compartment with wet hands.Possibility of frostbite.
- Do not put food or containers in a place directly exposed to the cold air discharging port. It could be colder than the set temperature resulting in food damage.
- Do not keep medical products or lab materials in the refrigerator. This product is only for food storage.
- Do not put any glass bottles in the freezer compartment. When the content freze, it can burst and causing severe injury.

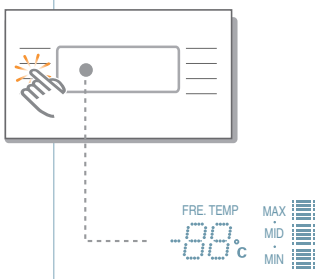
To adjust temperatures

Learn how to control the fridge & the freezer temperatures.
Power can be saved by keeping food in appropriate temperatures.



■ How to control freezer temperature

To control the freezer temperature, follow the procedures below.



Press the [FRE. TEMP] button.

▶ Freezer temperatures can be adjusted between -25°C and -17°C with an interval of 1°C. At this time, the temperature indication bars will be illuminating, showing the temperature range (MAX, MID or MIN).

When the freezer temperature is set, it will display the set temperature for the first 5 seconds. And then, it will display its current temperature.

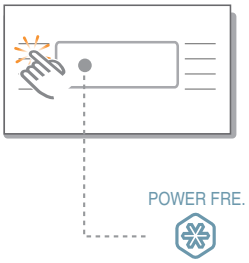
▶ When the set temperature and the displayed temperature are different from each other, it will be automatically adjusted to the set temperature.

▶ The numbers on the display represent the inside temperature of the freezer compartment.

Note

- The freezer temperature could change depends on the number of door opening times, the quantity of stored food and the ambient temperature.
- Each storage section in the freezer compartment may have a different temperature.
- When the temperature in the freezer compartment has increased due to frequent use or the storage of hot food, the temperature display will blink.(In this case, when the temperature reaches the set temperature, it will stop blinking. if when it keeps on blinking, please contact our service center.)

■ How to control freezer temperature



Press the [POWER FRE.] button.

POWER FRE will illuminate in the display and it will start operating.

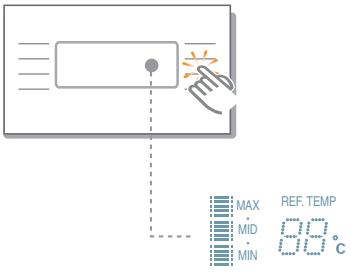
Press the [POWER FRE.]button one more time to cancel the POWER FRE function.

Note

- The POWER FRE function will be automatically turned off after a certain period of time and the freezer temperature will return to the temperature set right before the POWER FRE function is selected.
- When you press the [POWER FRE.] button, the refrigerator will continuously operate for a certain period of time.

■ How to control fridge temperature

To control the fridge temperature, follow the procedures below.



Press the [REF. TEMP] button.

▶ Fridge temperatures can be adjusted between 0°C and 5°C with an interval of 1°C . At this time, the temperature indication bars will be illuminating, showing the temperature range (MAX, MID or MIN).

When the fridge temperature is set, it will display the set temperature for the first 5seconds. And then, it will display its current temperature.

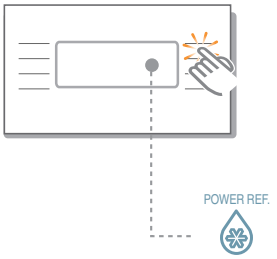
▶ When the set temperature and the displayed temperature are different from each other, it will be automatically adjusted to the set temperature.

▶ The numbers on the display represent the inside temperature of the fridge compartment.

Note

- The fridge temperature could change depends on the number of door opening times, the quantity of stored food and the ambient temperature.
- Each storage section in the fridge compartment may have a different temperature.
- When the temperature in the fridge compartment has increased due to frequent use or the storage of hot food, the temperature display will blink. (In this case, when the temperature reaches the set temperature, it will stop blinking. But, if it keeps on blinking, please contact our service center.)

■ To cool down the fridge compartment faster



Press the [POWER REF.] button.

▶ POWER REF will illuminate in the display and it will start operating.

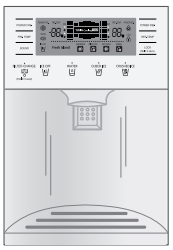
Press the [POWER REF.] button one more time to cancel the POWER REF function.

Note

- The POWER REF function will be automatically turned off after a certain period of time and the fresh food temperature will return to the temperature set right before the POWER REF function is selected.
- When you press the [POWER REF.] button, the refrigerator will continuously operate for a certain period of time.

Let's figure out how to use the dispenser.

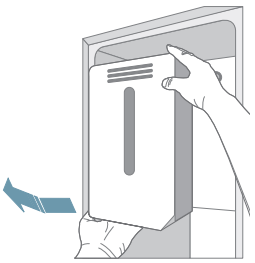
Enjoy high quality ice cubes and drinking water with the dispenser of the SAMSUNG refrigerator.



■ HOW TO USE DISPENSER

Samsung refrigerators have embeded water filters.
So, please use a supplied water filter when using it.
Ice cubes and water first made or supplied after the installation could send out plastic smells.

- Throw away the first full bucket of ice.
- Throw away the first six glassfuls of water.



■ Check if the ice maker works with following methods.

1 Take out the ice bin in the upper part of the freezer compartment.

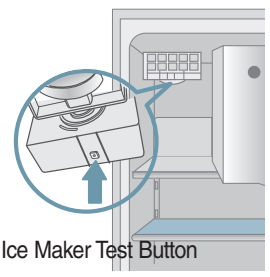
- Put your hand on the bottom of the ice bin and lift it up.And then,hold the upper part of it and pull it forward.

Caution If you drop it down, it could hurt your feet or damage the floor.

2 Press the ice maker test button at the upper part of the freezer compartment for 2 seconds.

- After the ice tray rotates, it goes back to its initial position. When it completes its rotation and water is supplied to the supply line, the operation of the ice maker is normal.

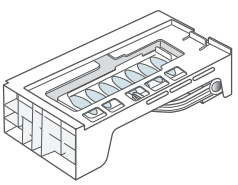
Note If you need more storage space, remove ice bucket and you can use that space as a storage space.



Ice Maker Test Button

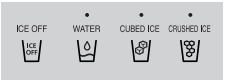
■ Keep in mind the followings when using the ice maker!

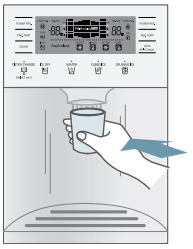
- It takes 12 hours to get down to temperatures cold enough to make ice cubes when the refrigerator is initially plugged in.
- In order to operate the ice maker properly, water pressure of 0.14 Mpa ~ 1.0 Mpa (1.4 ~10 kgf/cm², 1.4bar~10 bar)is required. And it have to be connected to portable water supply only.
- If common water pressure is higher than required pressure you had better use a decompression device to prevent from breakage
- The ice production speed depends on the number of door openings during its operationand using conditions such as the ambient temperature.
- When ice dispenser is not used frequently, ice cubes will melt and get joined together affecting the operation of the dispenser. At this time, take out the ice maker and throw away the ice lump.



Caution When you do not use water and ice for a long time such as during winter or vacation season, shut off the water valve to cut the water supply.
- If the water pipe or the water purifier ruptures or water leaks out of it, it could get flooded.

Caution When ice melts due to a power failure, wipe-dry the freezer compartment after taking out the ice maker and throwing away the ice lump
- Melted ice could escape the refrigerator making the floor slippery and damaging the floor.





■ To get ice

1 Press the CUBED ICE/CRUSHED ICE button and select the shape of ice.

2 Press the glass gently against the middle of the dispenser pad.
♣ Take the glass closer to the chute to prevent ice from bouncing out of the cup.

Caution

- If you get ice with a thin glass cup or ceramic ware, it could get broken.
- When you get ice stale in color, stop using it and contact our service center.
- Do not put your hands into the ice crusher discharge opening. You can get hurt.

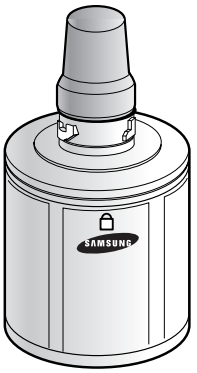
■ To get water

Press the WATER button and press the glass against the dispenser pad.

- ▶ Throw away the first six glassful of water after the installation. When you take out water after the installation, it could have plastic smell.
- ▶ Even though the refrigerator is in operation, the first glass of water could be warm. So, get several cubes of ice first and then take out water to drink cool water.

Note

You can take out up to six glasses of water continuously and water will be cooled down in 2~3 hours.



■ What is Water-Purifying Filter?

It is a parts filtering impurities that are bad for human being such as chlorine and its smell and offensive taste contained in tap water.

■ Filtrate and Purifying Effect

Filtrate of water-purifying filter is made from vegetable active carbon.

Purifying Effect

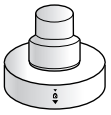
- It is NSF(National Science Foundation) certified, and meets a standard requirement for food safety of NSF 42,53. It also passed the following standard test.

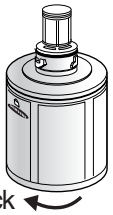
Certification Standard	Remove Capacity
NSF 42	Smell, Chloride
NSF 53	Pathogene, insecticide, asbestos, slime, benzol, organic compound, mercury

When to Replace

- When the green lamp on FILTER CHANGE (Hold 3 secs) icon in the display part of refrigerator turns orange, it is recommended to replace a filter. If the color of lamp turns red from orange, replace the filter immediately.
- Purchase a water-purifying filter from a near service center for replacement.

■ How To Replace Water-Purifying Filter





Unlock

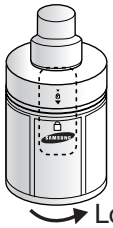
1 Separate a water-purifying filter

- Open the unit grill in the upper part of refrigerator, rotate the filter by 90° to the left (unlock), and pull it down.

Note — Place a bucket little bit bigger than the filter to catch the dropping water when separating the filter.

2 Put an installing date sticker on a new filter.

- Unpack the filter box, and peel off the red protective cap.
- Put an installing date sticker on the new filter.
  Example) If installing it in October, put on 'OCT 10' sticker.



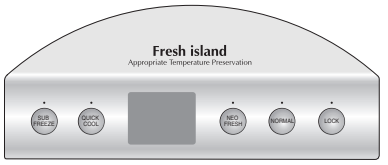
Lock

3 Fit a new filter in.

- Fit the filter in a fixing part, rotate it by 90° to the right(lock), and match an indicating line( ) with Lock( ) sign.
- Close an unit grill, and press ice-maker test button to check if water flows out.
- It is recommended to run off water for about 2 minutes (or 2 liter) when you install or replace a filter for the first time.
- After replacing a filter, press FILTER CHANGE (Hold 3 secs) button for 3 seconds until the color of lamp turns green from red.

Let's figure out the Fresh Island function.

You can speed up cooling or make frozen food soft enough to cut easily with this function. Also, by adjusting the temperature of each compartment, you can store customize the storage of different kinds of food.



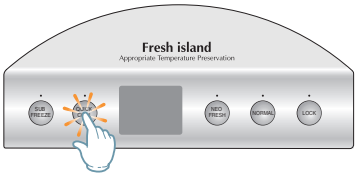
■ Function selection

1 When SUB FREEZE is selected

- When SUB FREEZE is selected, the temperature of the Fresh Island will be set to -5℃ and the temperature of the fridge com partment will be maintained at -5℃ regardless of its temperature setting.
- The temperature (-5℃) of SUB FREEZE falls into the subfreezing temperature range. Water in meat or fish will not freeze hard it will freeze soft enough that it can be cut easily.

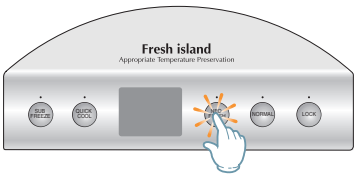
2 When QUICK COOL is selected

- With this QUICK COOL function, you can cool down up to three bottles of room temperature beer enough to drink within an hour.
- You can put food in the Fresh Island and press the QUICK COOL button,the refrigerator will operate for an hour continuously. If you use QUICK COOL, take out the food from the Fresh Island and put it in the fridge compartment during its operation. The food could become frozen with the strong flow air.
- To cancel the QUICK COOL function, press the QUICK COOL button once more. When the QUICK COOL function is completed, it goes back to the previous refrigeration setting.



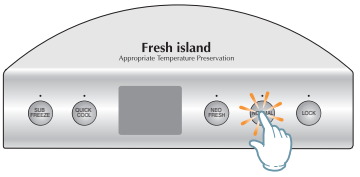
■ Function selection

3 When NEO FRESH is selected



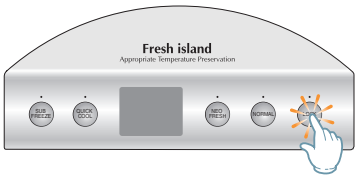
- When NEO FRESH is selected, the temperature of the Fresh Island will be set to -1°C and the temperature of the fridge compartment will be maintained at -1°C regardless of its temperature setting.
- -1°C is a temperature at which water in food is on the verge of freezing. With this temperature, you can freshly keep meat or fish that you are about to cook.

4 When NORMAL is selected



- When NORMAL is selected, the Fresh Island panel will display 3°C set at the Fresh Island temperature control and the Fresh Island will be controlled based on 3°C .
- When NORMAL is selected, it will be set to 3°C . So, you can have more refrigeration space by using it as the fridge compartment.

5 When LOCK is selected



- The system will be locked with its current setting and all the function buttons can not be changed
- To cancel the LOCK function, press the LOCK button once more.

Note

- Do not put food, vegetables or fruits with high water content in the Fresh Island.
- It can freeze them.
- Water contained in food begins to freeze at -1°C or -5°C So, beverages such as fruit punch and juice, vegetables and fruits could become frozen.
- Different types of beverages and foods may have different cooling times.

■ Types of wine

Red Wines

- They are made of various red grapes which have lots of fruit flavor, fragrance, silkiness and tannin. Different from white wines, they have various levels of tannin and they work with most of red meat dishes. They taste good at room temperature (18°C ~20°C).

White Wines

- They are made of ripe white grapes and some of red grapes. Being golden -brown in color, they have layers of intense flavor which are fruity, crisp, aromatic and oaky. Mostly, they are suited to fish dishes. They taste good at cold temperature (10°C).

Rosé Wines

- Usually pink or washed red in color, Rosés are almost same in the process of making wines. Those which aredry and fruity make excellent partners for a whole range of dishes from delicate fish to rich spicy food. They should be served chilled and drunk young.

Sparkling Wines

- The key process in producing sparkling wines or Champagne is a second fermentation that occurs in a sealed bottle. After the first fermentation, yeast and sugar are added to the young wine before it's sealed in heavy aglass bottles. The yeast performs a second bubble fermentation in the bottle. Champagne and sparkling wine have a wire cage holding the cork in the bottle.
Without this cage, corks could fly off because of the pressure inside the bottles. Particularly, those produced in Champagne, France are called Champagne. Along with them, Spumante from Italy is a popular sparkling wine.

Port Wines

- Sweet or dry wines with 15 percent alcohol or more are usually made by adding brandy or pure spirit to the wine. Adding brandy to the fermenting wine to stop the fermentation made them both alcoholic and deliciously sweet and that's how they've stayed.

■ Selecting good wines

A wine label is a guide to the contents of the bottle. Many wine labels lay all the information about the wine itself such as the grape, the place, the producer and the year with commendable clarity. So it is very important for you to read these labels. It is also good to know how to read wine labels.

1. The region the wine comes from
2. The appellation or the overall quality classification of the wine
3. The name and address of the wine bottler
4. The quantity of wine in the bottle
5. The alcohol content
6. The brand name of the producer
7. The address of the manufacturer
8. The place that the wine was bottled
9. The year the grapes were harvested
10. The country where the wine was produced

Please be sure to check how the wines are preserved in the wine store.

- Keep it out of direct light or warm temperature. No wine tastes good above a comfortable room temperature of about 20℃ .
- Choose a wine whose content in the bottle is full to its neck. The cork should not protrude from the bottle but should be flush with the rim. The wine exposed to the light, warmth and dry air will conspire to ruin the wine.

■ Wine accessories

Wine Glasses

- The ideal wine glass is a fa irly large tulip shape, made of fine, clear glass, with a slender stem. For white wine, it is important to hold the stem of the glass as the warmth of your hand may damage the flavor of the wine.

Cork Screws

- As a tool for opening the bottles of wine, th ere are a variety of cork screws from simple to automated types.

Vacuum Pump

- The lever pump creates more than enough vacuum to preserve your wine. It produces great vacuum power to prevent the flavors of wine from being deteriorated.

How to use the refrigerator effectively

To make cold air to flow freely

To maintain the fridge compartment temperature to 4°C , it sends out cold air near 0°C . So, when food containing water is placed deep inside, it could become frozen. If you place a wide, tall container it will block the cold air flow resulting an increase of the room temperature. To get sufficient cold air, make sure not to block its passages and let it flow freely.

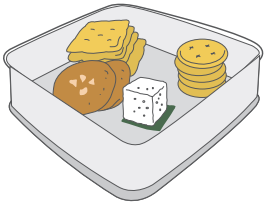
How to arrange food

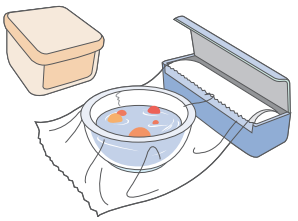
The veggie drawer is deep, vegetables pressed at the bottom could get bruised. It is better to keep vegetables such as spinach and spring onions in standing position. After cutting off the upper part of milk cartons matched to the height of the veggie drawer with a cutter or a pair of scissors, bond several of milk cartons together with plastic tape. By arranging vegetables with it, bruises can be prevented and it is much easier to handle them.

How to store food

To maintain crispy conditions of biscuits

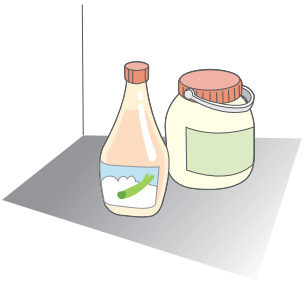
You can put them in an air tight container. But, you can easily maintain its crispy conditions by putting them in a regular container with a cube of sugar. Sugar absorbs moistures making biscuits to maintain their crispy conditions for an extended period of time.





To prevent food smells from permeating the inner liners

To prevent food smells from permeating the inner liners, make sure to wrap food in plastic wrap and put it in the refrigerator.



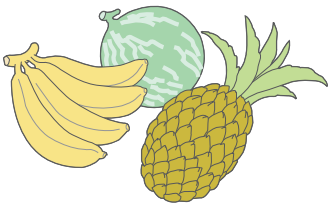
To maintain the taste of mayonnaise

It is best to keep the mayonnaise at room temperature. (Except sweltering season) Mayonnaise is quite sensitive to not only hot temperatures but also cold temperatures. So, it easily deteriorates in hot temperatures but also its main ingredients such as vinegar, oil and egg yolk will be separated from each other and it will lose its flavors when it is too cold. So, it is best to keep it in a cool place out of reach of direct sunlight or heat.

To frost the surface of beer cup

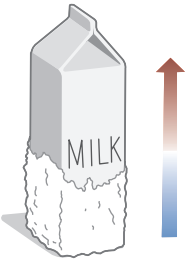
After pouring warm water into the cup, empty the cup when it gets warmed up.
And, turn it upside down and put it in tahe freezer compartment for about 30 minutes When you take it out later, you will find frosts sitting on the surface of the cup.

To keep tropical fruits



It is not a good idea keeping tropical fruits in the refrigerator tropical fruits do not reguire low temp.
For example, bananas and pineapples will turn black avocados and papayas will rot before they become ripe. Store them at room temperature and put them in the refrigerator when they ripe enough to eat.

To enrich milk



Put it in the freezer compartment and freeze it. The appropriate quantity of freezing is 500cc~1L.
When it is frozen hard, take it out and thaw it to half-frozen state. Because the half-frozen milk still contains ice with it, its percentage of water in milk is relatively low. So, its concentration level is high and you can enjoy more enriched milk.

To make transparent and clean ice

When you make transparent and clean ice with the ice maker, boil water first and then freeze it after cooling it down.
If you boil away impurities in water, you can make transparent and clean ice.

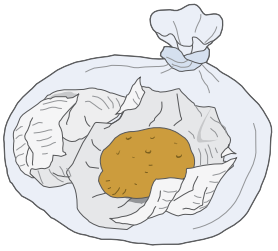
Store wines on their side

It's recommended to store wine bottles on their side.

■ How to store food

To store spices in the freezer or fridge compartment

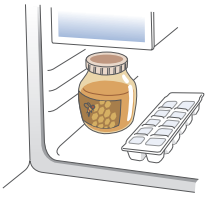
When storing spices, you need to prevent their flavors from escaping. Store it in a dry place out of reach of direct sunlight. The freezer or fridge compartment is the best suitable place to store spices.



To store potatoes freshly

Because potato buds contain toxins, you need to get rid of the buds. To store potatoes that went sprout up, wrap them with the paper, put it in a plastic bag and store it in the fruit drawer. You can enjoy fresh potatoes for an extended period of time.

■ How to freeze food properly



To store honey not to be frozen

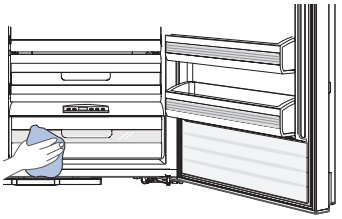
Store it in the freezer compartment. Higher quality honey becomes white and harder when being stored in the fridge compartment. It is because its glucoses become crystallized. Its quality will not be affected but it gets hard to dissolve it in water and to handle it. When you put it in the freezer compartment, you can keep it in its original liquid state.

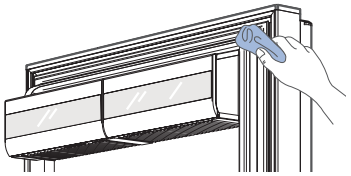
To freeze food properly

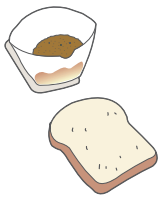
There are none-appropriate foods to freeze such as vegetables, eggs, tofu and devil's tong jelly.
You can freeze meat without salting but it's best to salt and freeze it.

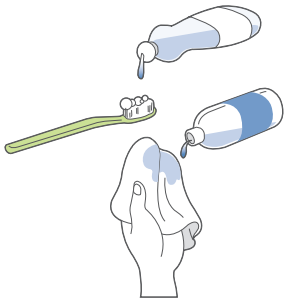
To speed up freezing

When freezing food slowly, the property of food will be damaged resulting in loss of taste. To speed up the freezing process, select the POWER FRE. function.









■ HOW TO CLEAN AND TAKE CARE OF THE PRODUCT

Inside refrigerator/Accessories

- Wipe with a clean cloth lightly dampened with water or mild liquid dish detergent.

Door gasket

- Wipe with a clean cloth lightly dampened with mild liquid dish detergent and clean the grooves with cotton balls.

Dispenser

- After wiping with a wet cloth, wipe dry with a dry cloth.
- If the spill shelf is stained with slime, wipe with a clean cloth lightly dampened with vinegar.

How to get rid of oders

- Warm water, soft cloth and 2 table spoons of BI - CARB soda whip down all the interior of fridge.

How to remove mold on door gaskets

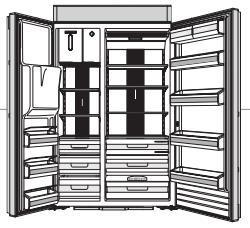
- Brush with a tooth brush dampened with pure dish detergent.
  It is difficult to scrub off the mold once it becomes black.
  Care must be taken not to damage the gaskets.

Note

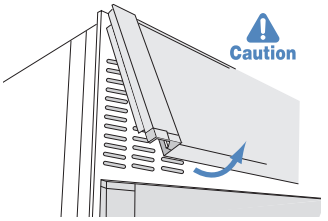
When you do not use your refrigerator or when you clean it, open the grille panel, set the power switch to the O (OFF) and dry the compartments with their doors open. Then, wipe with a dry cloth or towel.

Caution

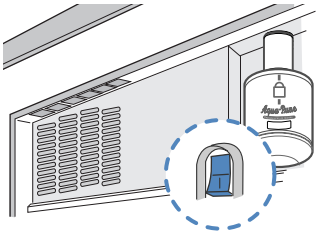
- Do not directly spray water or wipe with benzene, thinner, bleach, alcohol or acetone. Possibility of explosion, electric shock or fire.
- Do not use brushes or scouring pads to wipe the inside & outside of the refrigerator.
- Make sure to set the power switch to the O (OFF) before cleaning the refrigerator and set it to the I (ON) after the cleaning to prerent the Possibility of electric shock or fire.

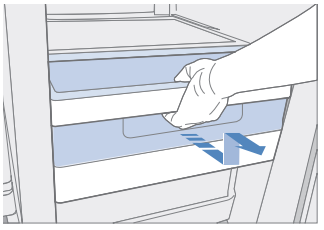


Disassembling for cleaning



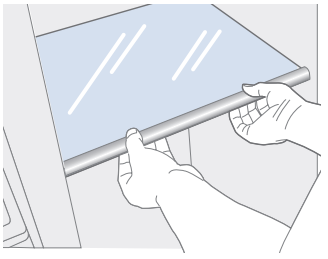
Before cleaning the refrigerator, flip the grille panel up as shown in the figure and set the power switch to the O (OFF). To prevent electric shock then, disassemble when turned off.
Water tends to gather inside and flow down on the bottom. So, wipe dry the components inside with a dry cloth and re-assemble.





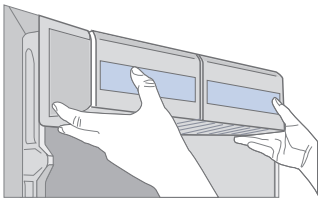
Veggie/Fruit Box

- Hold it with one hand, pull it forward while lifting it up slightly to remove.



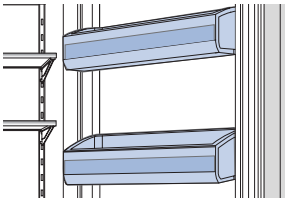
Veggie Box Lid

- Tilt the lid up at front, pull it forward and out of the refrigerator. Take out the mid glass after removing the veggie box.



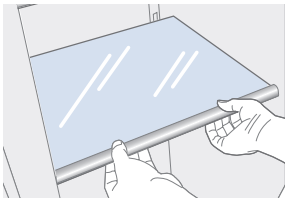
Dairy Bin

- Flip up the dairy bin cover and remove it while pushing it back.
- Hold the dairy bin with both hands and lift it up and out of the door.



Freezer/Fridge Door Bin

- Hold it with both hands and lift it up and out of the door.

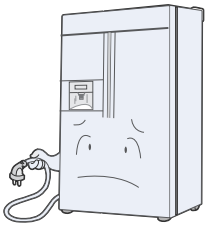
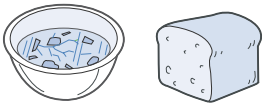
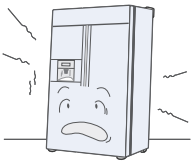


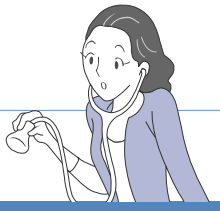
Freezer/Fridge Shelves

- Tilt shelf up at front, then lift it up and out of the tracks on rear wall of refrigerator.

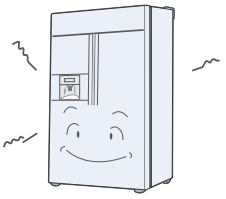
Note

- When you do not use your refrigerator or when you clean it, open the grille panel, set the power switch to the O (OFF) and dry the compartments with their doors open.
- Please contact our service center when replacing lamps to prevent possibility of electric shock.

Problem	Possible Causes	What To Do
Fridge or freezer compartment too warm. (Low cooling power) 	Master power control set to O (OFF).	Switch on the power ("I" pressed).
	Refrigerator is unplugged.	Plug in the power plug again.
	Temperature controls set at the warmest setting.	Press the FRE. TEMP/ REF. TEMP button and set it colder.
	Refrigerator installed in a place exposed to direct sunlight and in the vicinity of heater.	Keep the refrigerator away from direct sunlight and heating appliances.
Frozen food in fridge compartment. 	Fridge control setting is too cold.	Press the temperature control button and set to a warmer setting.
	Refrigerator installed in a too cold place.	When the ambient temperature is lower than 5°C, food can become frozen.
	Food containing lots of water is placed closer to the cold air discharging port.	Put food containing lots of water on the front part of the self.
Vibration or rattling sounds. 	The floor is slanted or it is not firm enough.	Move the refrigerator and put it on a hard leveled floor.
	There is something blocking the ventilation in the machine compartment on the top.	If there is anything blocking the ventilation, remove it.
Refrigerator has odor.	Dishes are stored without being wrapped in plastic.	Make sure to put lids on containers dishes wrapped.
	Meat, fish and chicken are put in the refrigerator without plastic packing.	Put them in clean plastic bags and tie up their tops before storing them.
	Foods are stored for too long.	Foods stored for a long time could have odors.

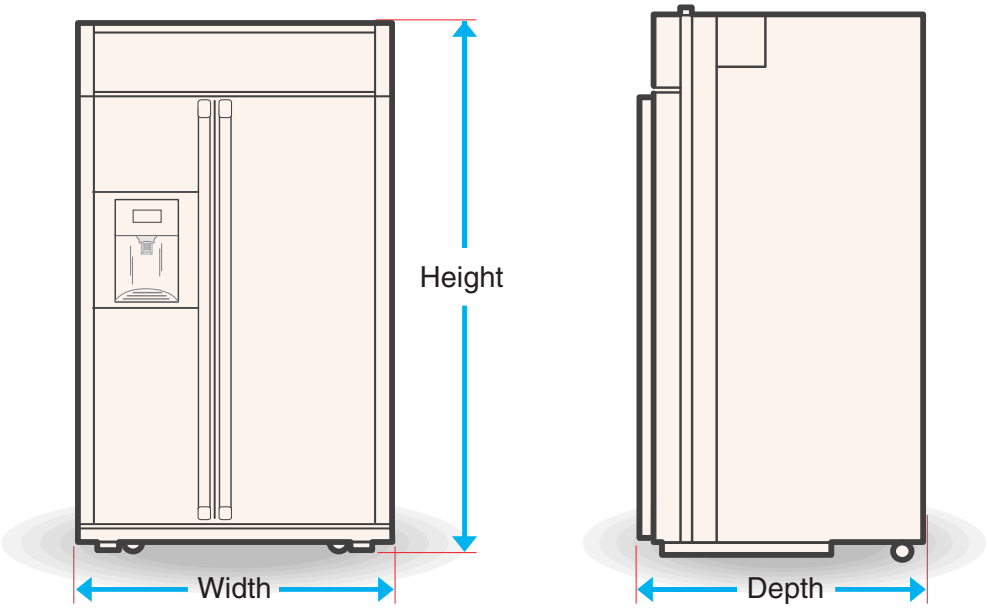


Problem	Possible Causes	What To Do
Ice cubes have odor.	Ice cubes are made with tap water.	Water could contain chlorine sending out odors. Make ice with filtered water.
	Interior of refrigerator needs cleaning.	Clean the interior of the refrigerator frequently to remove food smells.
	Ice storage bin needs cleaning.	Wipe the surface of the ice bin frequently.
	Food dropped on the shelf.	Wipe it away completely.
Water dispenser does not work.	Water supply line is turned off.	Turn on water supply.
	Water supply line is not connected properly.	Review the installation manual or contact our service center.
Water is warm.	The fridge compartment is too warm.	Press the REF. TEMP button and set to a colder setting.
	Six glassfuls of water have been used continuously.	When more than six glasses of water are dispensed it takes long time for it to cool down.
Cube dispenser does not work.	No ice cubes or not enough ice cubes.	Wait 12 hours for ice cubes to be made requires 24 hours to have enough ice cubes in the ice bin.
	Ice cubes get stuck together.	When ice is not used for a long time or when there is a power failure, ice cubes could get stuck together. In this case, throw away the ice lump and empty the ice bin to get freshly made ice cubes.

Problem	Possible Causes	What To Do
Door hard to open!	It has just closed after being opened.	If you open the door again within 5~10 seconds, it could be hard to open due to the pressure difference between the inside and the outside of the refrigerator. Try again after a while.
It makes a water flowing noise. (Ex : Gurgling, Sizzling, Popping)  A clicking sound may occur in the refrigerator! (Ex: Clicking, Rattling, Chirping, Cracking)	The flow of refrigerant through the cooling coils may make a water flowing noise (ex: gurgling, sizzling, popping) or a water dropping noise may occur during the defrost cycle as ice melts and flows. It is not a defect. This is a normal function.	
	When the refrigerator cools to the correct temperature, when cooling coils expand or contract, or when relays activate to control refrigerator components, you can hear these sounds. It is not defect. This is a normal function.	
Frost builds up in the freezer compartment! (Moisture collects inside the fridge compartment)	The ambient temperature and humidity are high, the door is left open for a long time or food with lots of water is stored without a lid.	In this case, frost or moisture could build up. Wipe dry it.
Moisture builds up on the outside surface of the refrigerator and on the interior lamp cover!	The freezer door has remained open for a long time.	When the fridge door remains open for a long time, the fridge lamp cover will be warmed up by the halogen lamp (35W) resulting in water condensation. Wipe dry it.
	The ambient humidity is too high.	When it is humid outside, water in the air could get condensed on the relatively cold fridge surfaces.

Model Name		TS48W***
		48"
GROSS volume	Total	766
	Freezer Room	279
	Fridge Room	487
Storage volume	Total	705
	Freezer Room	255
	Fridge Room	450
Weight		260kg
Dimension	Width(mm)	1,219
	Height(mm)	2,083
	Depth(mm)	706
Rated Voltage/Frequency		AC 230~240V/50Hz

▶ Design & specifications can be changed to improve quality without any notice in advance.



Ambient Room Temperature Limits

This fridge/freezer is designed to operate in ambient temperatures specified by its temperature class marked on the rating plate.

Temperature Class	Symbol	Ambient Temperature	
		Maximum	Minimum
Extended Temperate	SN	32°C (90°F)	10°C (50°F)
Temperate	N	32°C (90°F)	16°C (61°F)
Subtropical	ST	38°C (100°F)	18°C (64°F)
Tropical	T	43°C (109°F)	18°C (64°F)

NOTE: Internal temperatures may be affected by such factors as the location of the fridge/freezer, ambient temperature and the frequency with which you open the door. Adjust the temperature as required to compensate for these factors.

English

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)
(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

If you have any questions or comments relating to Samsung products,
please contact the SAMSUNG customer care center.
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1-800-SAMSUNG (7267864)
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